3.9 NOISE

Updates to the Draft EIS Section 3.9 include the addition and deletion of text and revision of Tables 3.9-4 and 3.9-5. These updates are based on public comments on the Draft EIS and information provided by the Applicant. The updates to the text and changes to the tables do not change the conclusion about the potential noise impacts presented in the Draft EIS.

3.9.2 Existing Conditions

- On Page 3.9-6 of the Draft EIS, the fourth paragraph should be deleted and replaced with the following text.

Based on the results of the two noise studies, background or ambient noise levels in the project vicinity are higher than expected for a rural environment with residences and scattered industrial facilities. As noted above, wind gusts, creeks, nearby industries, and more importantly, transient noise all contribute to the existing noise environment surrounding the location of the proposed cogeneration facility. These background levels were used in calculating predicted (modeled) noise levels from an operating cogeneration facility. The estimated noise levels combining modeled and background noise levels are shown in Table 3.9-5.

3.9.3 Impacts of the Proposed Action

- The last two paragraphs on Page 3.9-7 and the first three paragraphs on Page 3.9-8 should be deleted and replaced with the following text.

Two studies were performed to predict the noise emissions from the project. The first, conducted by Golder and Associates in 2002, was based on a project designed to use air-cooling. The second, conducted by Hessler Associates Inc., revised the project design to the current configuration using a wet-cooling system. The Hessler noise study predicted operational noise levels at the 15 chosen receptors and estimated noise levels at the selected offsite receptors, based on the anticipated noise levels produced by the proposed cogeneration facility without including the background or transient sounds. The baseline analysis assumed standard power-generating equipment would be used throughout the facility without any special or unusual improvements specifically intended to reduce far-field noise. The primary noise-generating equipment would consist of three CTGs, one STG, three HRSGs, and an air/water cooling tower. Modeling assumed that the CTGs and STG would be housed within standard, acoustically treated enclosures (but not within buildings). Besides the main components, other equipment that could generate potentially significant noise levels, such as boiler feedwater pumps, circulating water pumps, main transformers, and various steam lines, were included in the model.

Standard noise control features such as a combustion turbine inlet silencer, various turbine enclosures, and enclosure of the steam turbine structure below the operating deck were also incorporated into the modeling.

The Hessler study, however, found that a moderate reduction in HRSG stack noise would significantly lower the overall noise levels facility-wide. Consequently, Hessler recommended, and the Applicant accepted, the addition of stack silencers with a nominal reduction of 10 dBA in stack sound; the stack silencers were incorporated into the project design and noise modeling. With this improvement, total noise levels at some of the more critical locations would be reduced by 3 to 4 dBA. The stack silencers also carry an additional benefit that stack noise is less likely to adversely affect levels at receptors situated downwind from the facility. The high elevation of the stacks makes their noise more susceptible to wind effects.

Finally, to ensure the modeling results are conservative, the noise impact modeling predicted the maximum noise levels to be produced by the proposed project. To achieve these conditions, no attenuation factors, such as vegetation or topography, were included in the modeling for existing or future noise results.

Table 3.9-4 presents the projected noise levels of the proposed project at the 15 receptors as originally modeled by Hessler with inclusion of stack silencers. This modeling indicates that the noise levels of the proposed project would be below the regulatory daytime and nighttime allowable levels as shown in Table 3.9-4.

- Table 3.9-4 on Page 3.9-8 of the Draft EIS should be deleted and replaced with the following table.

Table 3.9-4: Estimated Noise Levels without Background Ambient Sound Levels (L_{eq} dBA)

Receptor Location	Hessler's Predicted Noise Level (with stack silencers)	Most Stringent State Regulatory Limit (nighttime)
1 (I)	47	70
2 (R)	41	50
3 (I)	46	70
4 (I)	39	70
5 (I)	40	70
6 (I)	41	70
7 (R)	40	50
8 (R)	34	50
9 (R)	38	50
10 (R)	40	50
11 (R)	40	50
12 (I)	60	70
13 (I)	48	70
14 (R)	44	50
15 (R)	35	50

Note: I=industrial, R=residential

- The last paragraph on Page 3.9-8, which continues onto the next page, should be deleted and replaced with the following text.

As shown above, all of the modeled noise levels produced solely by the cogeneration facility would be below the state regulatory thresholds. Because stack silencers have been added to the project design, Hessler's modeled results were used to calculate the noise levels at the 15 receptor locations to include the background noise conditions combined with the noise produced from the cogeneration facility. Table 3.9-5 outlines the existing background conditions measured by Golder and Hessler, the estimated combined noise levels predicted by Hessler (existing conditions plus the predicted cogeneration noise levels with stack silencers), and the increase above existing noise levels.

- Table 3.9-5 on Page 3.9-9 of the Draft EIS should be deleted and replaced with the following table.

Table 3.9-5: Estimated Noise Levels Combining Modeled and Background Sources (L_{eq} dBA)

Receptor	Daytime Noise Level			Nighttime Noise Level		
	Existing Condition [1]	Existing Condition plus Modeled Level with Stack Silencers [1]	Increase above Existing Condition [1]	Existing Condition	Existing Condition plus Modeled Level with Stack Silencers	Increase above Existing Condition
1 (I)	68	68	0	65	65	0
2 (R)	58	59	1	63	63	0
3 (I)	61	61	0	60	61	1
4 (I)	50	51	1	52	53	1
5 (I)	63	63	0	58	58	0
6 (I)	61	61	0	59	59	0
7 (R)	63/51 (1)	63/51	0	56	56	0
8 (R)	55	55	0	52	52	0
9 (R)	57	57	0	50	50	0
10 (R)	62/42 (1)	62/44	0/2	54	54	0
11 (R)	61/40	61/43	0/3	53	53	0
12 (I)	64	65	1	61	63	2
13 (I)	62	62	0	57	57	0
14 (R)	60/41	60/45	0/4	51	52	1
15 (R)	47	48	1	39	40	1

Note: I=industrial, R=residential

1 Where background measurements were performed by Golder and Hessler, both measurements as shown with Golder data first and Hessler data second.

- On Page 3.9-9 of the Draft EIS, the second and third paragraphs should be deleted and replaced with the following text.

The modeling results presented in Table 3.9-5 indicate that one receptor (14 R) would experience a perceptible increase (above 3 dBA) in noise during the daytime. Two receptors would experience a noise increase over 1 dBA. Receptor 10 is estimated to increase by 2 dBA during the daytime, and Receptor 11 is estimated to increase by 3 dBA during the daytime. Receptor 12 is estimated to increase by 2 dBA at night. As shown on Table 3.9-2, these receptors range from 300 feet to 1.48 miles from the proposed cogeneration facility.

3.9.6 Mitigation Measures

- The first and second bullets on Page 3.9-12 should be deleted.

- Since the Draft EIS was published, the Applicant and Whatcom County have reached a Settlement Agreement regarding conditions of the project, including noise mitigation measures. On Page 3.9-12 of the Draft EIS, the following bullets should be added at the top of the page.

- The Applicant would operate the project in compliance with applicable Washington regulations governing noise from industrial facilities, found in Washington Administration Code Chapter 173-60.
- In addition to applicable Washington regulations, the Applicant would comply with the following limitations when the project is operating normally with all units operating at full load:
  - At Receptor 7 (as identified in Figure 3.9-1 of the Draft EIS), project-only noise would not exceed 47.7 dBA (regardless of wind direction).
  - At Receptor 9 (as identified in Figure 3.9-1 of the Draft EIS), project-only noise would not exceed 45.8 dBA (regardless of wind direction) and would not exceed 70 dBC (regardless of wind direction).
  - At Receptor 10 (as identified in Figure 3.9-1 of the Draft EIS), project-only noise would not exceed 41.5 dBA (during calm wind and winds from all quadrants except southwest) or 45.0 dBA (during wind from the southwest quadrant) and would not exceed 70 dBC (regardless of wind direction).
  - At the Cottonwood Beach receptor, located at 4961 Morgan Road, project-only noise would not exceed 36.4 dBA (during calm winds and winds from all quadrants except southwest) or 43.6 dBC (during wind from the southwest quadrant) and would not exceed 70 dBC (regardless of wind direction).
  - At Receptor 13 (as identified in Figure 3.9-1 of the Draft EIS), project-only noise would not exceed 54.4dBA (regardless of wind direction).
- Within 180 days of the beginning of operation, the Applicant would conduct post-operation noise monitoring at the five receptors identified in the agreement to determine compliance with the noise limitations, and report the results of the monitoring to EFSEC. Compliance would be verified by measurements taken when the project is operating normally with all units operating at full load. Compliance monitoring would be conducted in accordance with the stipulations referenced in the agreement.